UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,857	03/22/2004	Valerie Bonnardel	3076.PC	1721

7590 09/20/2007

Karen G. Kaiser
NATIONAL STARCH AND CHEMICAL COMPANY
P.O. Box 6500
Bridgewater, NJ 08807-0500

EXAMINER	
KAROL, JODY LYNN	

ART UNIT	PAPER NUMBER
1609	

MAIL DATE	DELIVERY MODE
09/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/805,857	BONNARDEL ET AL.	
	Examiner	Art Unit	
	Jody L. Karol	1609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/18/2004 and 11/17/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-22 are pending and examined on the merits herein.

Information Disclosure Statement

1. The information disclosure statements (IDS) filed on 6/18/2004 and 11/17/2005 are in compliance with the provisions of 37 CFR 1.97. However, some of the references were not considered because English translations of the documents were not provided, and their relevance to the application was not indicated.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The disclosure is objected to because the abstract is identical to the Summary of the Invention on page 1 of the specification. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 21-22 are directed to a method of preparing a stable cosmetic or personal care emulsion comprising **adding** an emulsifying effective amount of the compositions claimed in claim 1 or in claim 14. However, essential steps are missing; it is not indicated **to what** the composition of claim 1 or claim 14 is added to, or how it is added.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Müller et al. (US 6,248,338 B1) in view of Chiu et al. (US 4,977,252).

Claims 1-20 are directed towards compositions comprising two modified starch components: (a) a first component comprising at least one pregelatinized, crosslinked starch selected from a C_2-C_5 hydroxyalkyl starch and a C_2-C_{18} acyl starch; and (b) a second component comprising at least on starch derivative containing a hydrophobic group or both a hydrophilic group and a hydrophobic group, which has been degraded by reaction with an exo-enzyme capable of cleaving 1,4-alpha-D-glucosidic linkages from non-reducing ends of starch, but incapable of cleaving 1,6-alpha-D-glucosidic linkages of starch.

Müller et al. is important for teaching compositions for the cleaning or caring for the skin, teeth, or hair containing the first component (a) of the instant claims. Müller et al. teaches compositions comprising an aqueous phase containing a pregelatinized, crosslinked starch selected from C_2-C_5 hydroxyalkyl starch and a C_2-C_{18} acyl starch as claimed in the instant claims 1, 8-12, and 17-18 (see abstract and claim 1). Müller et al. also teaches that the starch can be crosslinked via phosphorylation in which the

starch is reacted with phosphorous oxychloride, phosphorous pentoxide, or sodium trimetaphosphate as claimed in the instant claims 2-4 (see column 2, lines 46-52), or via reaction with C_4-C_{18} alkane or alkene dicarboxylic acids as claimed in the instant claim 2 (see column 2, lines 55-58). Particularly preferred starches derivatives mentioned are hydroxypropyl di-starch phosphate and acetylated di-starch adipate as claimed in the instant claims 5-7, 14,16, and 19-20 (see column 3, lines 27-30 and claims 2-3). Müller et al. further teaches that the pregelatinized, hydroxypropyl di-starch phosphate is prepared from a waxy maize starch as claimed in the instant claims 14 (see examples), and that composition contain inorganic salt additives, such as Epsom salt as claimed in the instant claims 17 and 19 (see column 8, 39-45 and examples, particularly 4-6, and 46). Waxy maize starch is synonymous with waxy corn starch. It is also noted that instant claims 17 and 19 are directed to compositions that contain **up to** 10% salt, and compositions that meet all other limitations, but do not contain any salt, also fall under these claims.

The instant claims differ from the Müller et al. reference in that the instant claims contain an additional starch component (b). While Müller et al. does not specifically teach the starch of component (b), it is indicated that the composition can be used in conjunction with other starches, including modified starches (see column 5, lines 19-22).

Chiu et al. teaches modified starches useful for emulsifying industrial products that comprise a starch derivative containing a hydrophobic group of both a hydrophilic group and a hydrophobic group, which has been partially degraded by an exo-enzyme capable of cleaving 1,4-alpha-D glucosidic linkages from non-reducing ends of the

starch, but incapable of cleaving 1,6-alpha-D glucosidic linkages of the starch (see abstract and claim 1). The modified starch taught by Chiu et al. is identical to the component (b) starch as claimed in the instant claims 1-7, 12, and 17-18. Chiu et al. further teaches in a preferred embodiment that the starch is derivitized with an alkenyl cyclic dicarboxylic acid, specifically octenylsuccinic anhydride as claimed in the instant claims 8-9, 13-16, and 19-20 (see column 6, lines 3-4 and 29-31 and claim 5). Chiu et al. also teaches that the enzyme used to degrade the starch is beta-amylase as claimed in the instant claims 10-11, 14-16, and 19-20, but that other enzymes such as exo-alpha-1,4 glucosidase, exo-1,4-alpha-D-glucan maltotetrahydrolase, or exo-1,4-alpha-D-glucan maltohexahydrolase may be used to prepare the starch as additionally mentioned in the instant claim 10 (see column 7, lines 1-9 and claim 3). Chiu et al. also indicates that waxy maize (corn) starch may be used to prepare the starch derivative as claimed in the instant claim 14 (see column 5, lines 29-31 and claim 4), and that the starch may be converted to a water-fluidity (WF) of up to about 60 as claimed in the instant claim 12 (see claim 2).

Müller et al. (US 6,248,338 B1) and Chiu et al. (US 4,977,252) are considered to be analogous art because they both teach starch derivatives that can be used as emulsifiers for similar applications. Müller et al. teaches that the starch derivative acts as a stability improver and emulsifier or coemulsifier for cosmetic or personal care compositions such as compositions for cleaning or caring for the skin, teeth or hair (see abstract and column 5, lines 24-28). Müller et al. further indicates that the starch raw materials have long been used in foods and are non-toxic (see column 8, lines 47-54).

Chiu et al. also teaches that the modified starches have emulsification properties, and are present in emulsions with improved stability (see claim 1). Chiu et al. indicates that the starch emulsifiers have applicability in industrial products, specifically in food or beverage products, but that they also can be utilized in other non-food end uses (see abstract and column 5, lines 20-24). This falls under cosmetic and personal care compositions as claimed in the instant claims 17-20.

The starch derivatives of component (a) and component (b) are both well known starches in the art, with well-known emulsification properties. It is obvious to combine individual compositions taught to have the same utility to form a new composition for that very same purpose (*In re Kerkhoven*, 626 F.2d 846, 205 U.S.P.Q 1069 (C.C.P.A. 1980)). Therefore, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to combine the starch derivative as taught by Müller et al. with the starch derivative as taught by Chiu et al. to obtain an emulsifier composition suitable for cosmetic and personal care compositions.

In addition, claim 16 claims a specific ratio of the starch components (a) and (b). The result-effective adjustment in conventional working parameters (e.g., determining an appropriate amount of the components within the composition) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

Conclusion

No claims are allowed.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jody L. Karol whose telephone number is (571) 274-3283. The examiner can normally be reached on 8:30 am - 5:00 pm Mon-Fri EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Stucker can be reached on (571) 272-0911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

JLK

SREENI PADMANABHAN
SUPERVISORY PATENT EXAMINER